Section 1: Product and Company Identification

Gas and Supply
125 Thruway Park
Broussard, LA 70518
877-441-7311
Fax: 337-839-8235
www.gasandsupply.com

Product Code: Oxygen (0.0001 - 19.49%), Nitrogen (Balance)

Synonyms: N/A
Recommended Use: Calibration Gas
Usage Restrictions:

Section 2: Hazards Identification

Warning

Hazard Classification:
Compressed Gas - H280
Gases Under Pressure

Hazard Statements:
H280 - Contains gas under pressure; may explode if heated
OSHA-H01 - May displace oxygen and cause rapid suffocation

Precautionary Statements
P202 - Do not handle until all safety precautions have been read and understood
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, face protection, protective gloves, protective clothing
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P303+P361 - If exposed or concerned: Get medical advice/attention
P403 - Store in a well-ventilated place
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG06 - Close valve after each use and when empty
CGA-PG10 - Use only with equipment rated for cylinder pressure
CGA-PG14 - Approach suspected leak area with caution
CGA-PG21 - Open valve slowly

Prevention:
Use and store only outdoors or in a well ventilated place

Other Hazards: No additional information

Response: Not applicable
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight.
Store locked up.

Disposal:
Dispose of contents and/or container in accordance with applicable regulations.

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substance</th>
<th>Mixture</th>
<th>Chemical Family</th>
<th>Trade Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>OXYGEN, COMPRESSED GAS</td>
<td>inorganic, gas</td>
<td>OXYGEN; DIOXYGEN; MOLECULAR OXYGEN; OXYGEN MOLECULE; PURE OXYGEN; UN 1072; O2</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>NITROGEN, COMPRESSED GAS</td>
<td>inorganic, gas</td>
<td>DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N2</td>
</tr>
</tbody>
</table>

Section 4: First Aid Measures

<table>
<thead>
<tr>
<th>Skin Contact</th>
<th>Eye Contact</th>
<th>Ingestion</th>
<th>Inhalation</th>
<th>Note to Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>None expected</td>
<td>None expected</td>
<td>Not likely route of exposure</td>
<td>If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.</td>
<td>For inhalation, consider oxygen</td>
</tr>
<tr>
<td>Wash exposed skin with soap and water.</td>
<td>Flush eyes with plenty of water.</td>
<td></td>
<td>If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.</td>
<td></td>
</tr>
</tbody>
</table>

Section 5: Fire Fighting Measures

<table>
<thead>
<tr>
<th>Suitable Extinguishing Media</th>
<th>Products of Combustion</th>
<th>Protection of Firefighters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-flammable. Use extinguishing agent appropriate for the material which is burning. Use water in large quantities for fires involving oxygen.</td>
<td>Non-flammable</td>
<td>Respiratory protection may be needed for frequent or heavy exposure.</td>
</tr>
</tbody>
</table>

Section 6: Accidental Release Measures

<table>
<thead>
<tr>
<th>Personal Precautions</th>
<th>Environmental Precautions</th>
<th>Methods for Containment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.</td>
<td>Avoid contact with combustible materials.</td>
<td>Stop leak if possible without personal risk.</td>
</tr>
</tbody>
</table>

Methods for Cleanup | Other Information
N/A | None
**Section 7: Handling and Storage**

<table>
<thead>
<tr>
<th>Handling</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.</td>
<td>Store in a well ventilated area, protected from direct sunlight.</td>
</tr>
</tbody>
</table>

**Section 8: Exposure Controls/Personal Protection**

**Exposure Guidelines**

No occupational exposure limits established for this material.

**Engineering Controls**

Handle only in fully enclosed systems or with adequate ventilation.

<table>
<thead>
<tr>
<th>Eye Protection</th>
<th>Skin Protection</th>
<th>Respiratory Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye protection not required, but recommended.</td>
<td>Wear leather gloves when handling cylinders</td>
<td>Respiratory protection may be needed for frequent or heavy exposure.</td>
</tr>
</tbody>
</table>

**General Hygiene considerations**

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

**Section 9: Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Appearance</th>
<th>Color</th>
<th>Change in Appearance</th>
<th>Physical Form</th>
<th>Odor</th>
<th>Taste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Gas</td>
<td>Clear</td>
<td>Colorless N/A</td>
<td>Gas</td>
<td>Odorless</td>
<td>Tasteless</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Gas</td>
<td>Clear</td>
<td>Colorless N/A</td>
<td>Gas</td>
<td>Odorless</td>
<td>Tasteless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Flammability</th>
<th>Partition Coefficient</th>
<th>Autoignition Temperature</th>
<th>Upper Explosive Limits</th>
<th>Lower Explosive Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Not flammable</td>
<td>Not available</td>
<td>Not applicable</td>
<td>Nonflammable</td>
<td>Nonflammable</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Not flammable</td>
<td>Not available</td>
<td>Not applicable</td>
<td>Nonflammable</td>
<td>Nonflammable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Freezing Point</th>
<th>Vapor Pressure</th>
<th>Vapor Density</th>
<th>Specific Gravity</th>
<th>Water Solubility</th>
<th>pH</th>
<th>Odor Threshold</th>
<th>Evaporation Rate</th>
<th>Viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>-297 F (-183 C)</td>
<td>760 mmHg @ -183 C</td>
<td>1.1 (Air=1)</td>
<td>Not applicable</td>
<td>3.2% @ 25 C</td>
<td></td>
<td>Not available</td>
<td>Not applicable</td>
<td>0.02075 cP @ 25 C</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>-321 F (-196 C)</td>
<td>760 mmHg @ -196 C</td>
<td>0.967 (Air=1)</td>
<td>Not applicable</td>
<td>1.6% @ 20 C</td>
<td></td>
<td>Not available</td>
<td>Not applicable</td>
<td>0.01787 cP @ 27 C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Molecular Weight</th>
<th>Molecular Formula</th>
<th>Density</th>
<th>Weight per Gallon</th>
<th>Volatility by Volume</th>
<th>Volatility</th>
<th>Solvent Solubility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>31.9988 O2</td>
<td>1.309 g/L @ 25 C</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Soluble: Alcohol</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>28.0134 N2</td>
<td>1.2506 g/L</td>
<td>Not available</td>
<td>100%</td>
<td>1</td>
<td>Soluble: Liquid ammonia</td>
</tr>
</tbody>
</table>

**Section 10: Stability and Reactivity**

<table>
<thead>
<tr>
<th>Stability</th>
<th>Conditions to Avoid</th>
<th>Incompatible Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable at normal temperatures and pressure.</td>
<td>Excess heat</td>
<td>None known</td>
</tr>
</tbody>
</table>
### Stability

<table>
<thead>
<tr>
<th>Hazardous Decomposition Products</th>
<th>Possibility of Hazardous Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under normal conditions of storage and use hazardous decomposition products should not be produced.</td>
<td>Hazardous polymerization will not occur.</td>
</tr>
</tbody>
</table>

### Section 11: Toxicology Information

#### Acute Effects

<table>
<thead>
<tr>
<th></th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Not established</td>
<td>Not established</td>
<td>Irritation, changes in body temperature, nausea, difficulty breathing, irregular heartbeat, dizziness, disorientation, hallucinations, mood swings, pain in extremities, tremors, lung congestion, convulsions</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Not available</td>
<td>Not available</td>
<td>Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Eye Irritation</th>
<th>Skin Irritation</th>
<th>Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>No information on significant adverse effects</td>
<td>No information on significant adverse effects</td>
<td>No significant target effects reported.</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Contact with rapidly expanding gas may cause burns or frostbite</td>
<td>No information on significant adverse effects</td>
<td>Difficulty breathing</td>
</tr>
</tbody>
</table>

#### Chronic Effects

<table>
<thead>
<tr>
<th></th>
<th>Carcinogenicity</th>
<th>Mutagenicity</th>
<th>Reproductive Effects</th>
<th>Developmental Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>Not hazardous</td>
<td>Not available</td>
<td>Not available</td>
<td>No data</td>
</tr>
</tbody>
</table>

### Section 12: Ecological Information

#### Fate and Transport

<table>
<thead>
<tr>
<th></th>
<th>Eco toxicity</th>
<th>Persistence / Degradability</th>
<th>Bioaccumulation / Accumulation</th>
<th>Mobility in Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Fish toxicity: Not available invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available</td>
<td>Not available</td>
<td>Low bioaccumulation</td>
<td>Not available</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### Section 13: Disposal Considerations

- Dispose in accordance with all applicable regulations.

### Section 14: Transportation Information

#### U.S. DOT 49 CFR 172.101

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>ID Number</th>
<th>Hazard Class or Division</th>
<th>Packing Group</th>
<th>Labeling Requirements</th>
<th>Passenger Aircraft Only Quantity Limitations</th>
<th>Cargo Aircraft Only Quantity Limitations</th>
<th>Additional Shipping Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed gas, n.o.s. (Nitrogen, Oxygen)</td>
<td>UN1956</td>
<td>2.2</td>
<td>Not applicable</td>
<td>2.2</td>
<td>75 kg or L</td>
<td>150 kg</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Canadian Transportation of Dangerous Goods

<table>
<thead>
<tr>
<th>Shipping Name</th>
<th>UN Number</th>
<th>Class</th>
<th>Packing Group / Risk Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed gas, n.o.s. (Nitrogen, Oxygen)</td>
<td>UN1956</td>
<td>2.2</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Section 15: Regulatory Information

U.S. Regulations

<table>
<thead>
<tr>
<th></th>
<th>CERCLA Sections</th>
<th>SARA 355.30</th>
<th>SARA 355.40</th>
</tr>
</thead>
</table>

SARA 370.21

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>Chronic</th>
<th>Fire</th>
<th>Reactive</th>
<th>Sudden Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

SARA 372.65

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Not regulated.</td>
</tr>
</tbody>
</table>

OSHA Process Safety

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Not regulated.</td>
</tr>
</tbody>
</table>

State Regulations

<table>
<thead>
<tr>
<th></th>
<th>CA Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Not regulated.</td>
</tr>
</tbody>
</table>

Canadian Regulations

<table>
<thead>
<tr>
<th></th>
<th>WHMIS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>A,C</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>A</td>
</tr>
</tbody>
</table>

National Inventory Status

<table>
<thead>
<tr>
<th></th>
<th>US Inventory (TSCA)</th>
<th>TSCA 12b Export Notification</th>
<th>Canada Inventory (DSL/NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>Listed on inventory.</td>
<td>Not listed.</td>
<td>Listed on inventory.</td>
</tr>
</tbody>
</table>

Section 16: Other Information

<table>
<thead>
<tr>
<th></th>
<th>NFPA Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>HEALTH=1 FIRE=0 REACTIVITY=0</td>
</tr>
</tbody>
</table>

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard